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Evaluation of Nigeria Universities Websites Using Alexa Internet Tool: A Webometric Study

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Abstract

This paper seeks to evaluate the Nigeria Universities websites using the most well-known tool for evaluating websites "Alexa Internet" a subsidiary company of Amazon.com which provides commercial web traffic data. The present study has been done by using webometric methods. The top 20 Nigeria Universities websites were taken for assessment. Each University website was searched in Alexa databank and relevant data including links, pages viewed, speed, bounce percentage, time on site, search percentage, traffic rank, and percentage of Nigerian/foreign users were collected and these data were tabulated and analysed using Microsoft Excel worksheet. The results of this study reveal that Adekunle Ajasin University has the highest number of links and Ladoke Akintola University of Technology with the highest number of average pages viewed by users per day. Covenant University has the highest traffic rank in Nigeria while University of Lagos has the highest traffic rank globally. The fastest downloading speed and highest number of foreign users goes to University of Benin. Bayero University, Kwara State University and University of Uyo have the highest percentage of Nigeria users. Lagos State University with the highest estimated daily time spent on site by the visitors and lowest bounce percentage. The highest percentage of visits that came from search engines is for University of Agriculture, Abeokuta. Based on these research findings, recommendations were therefore made.

Keywords: Webometric, Nigeria, University, Website, Evaluation, Alexa Internet, Alexa databank

INTRODUCTION

University education is the apex of the educational learning process and it is a crucial facet of human development locally and globally. It is a base of high-level skills acquisition and necessary credentials for the labour market. In many countries, academic institutions, websites, are versatile communication devices, and are increasingly used for different purposes, ranging from attracting new students to providing online library catalogues. As related to research, academic institutions, websites can announce the existence and encourage the attainment of individuals, research groups, institutes and departments. They can also disseminate their findings, either by hosting online articles or by publishing summaries, data sets or tools. The pages themselves can be created centrally, by administrators or webmasters, or locally by individuals for themselves or their research team or projects. Prospective benefits of an effective web presence include greater research impact, attracting students, media interest and commercial contacts. In this perspective, it is somewhat logical to explore the measures of the effectiveness of websites, both to study the communication activity that they represent and to build useful evaluation metrics (Vaughan and Thelwall, 2005).

One of the decisive moment in Nigeria educational systems is the adoption of worldwide web (www), and a website is a type of classroom, a type of an office that brings people of the same interest together for knowledge sharing and administration (Rao and Hosein, 2017). Nowadays a website is playing the role of a public relation for the tertiary institution and the first point of contact to the web visitor either locally or globally when they are searching to know more about an institution (Andalib and Danaee, 2013). The website is bridging the gap of invisibility and communication continually in the educational system and creating more attention for the laggards of this technology. The exploit and uninterrupted use of the website in the developed countries universities are predominant, and the developing countries universities are heightening their effort in the aspect of education technology. Nigeria university websites, as well as the universities themselves, are very young in comparism with their counterparts in American and European countries such as Canada, US, UK, Germany, France, Spain, and Russia. Hence, the academic web space of Nigeria universities is an interesting experimental platform for the study of the relationship between universities and the evidence of cooperation between universities and other institutions in Nigeria. The researcher anticipate that the outcomes of this study can be of

great importance to stakeholders in the field of study such as government bodies of the Nigeria education system, the university managements and website developers.

Currently, there are 174 universities in Nigeria which comprises of 43 federal, 52 state, and 79 private universities (NUC, 2019). Finding the domain names of the official websites of these universities was quite easy. Due to the fact that the list of domain names were listed in NUC (2019) was complete and accurate, the list was adopted for the study. However, this study targeted domain names of the official websites of top 20 Nigeria universities. Of these 20 universities are 13 federal universities, 4 state universities and 3 private universities. Nigeria has 36 states and 1 Federal Capital Territory, which are divided into 6 geo-political zones: North West, North East, North Central, South West, South South, and South East. The 20 universities under investigation are fairly distributed into five zones: South West zone has 10 universities, North Central has 4 universities, South South has 3, North West has 2 universities and South East with 1 University. An exception is the North East zone. All the targeted universities websites have .edu.ng as their top-level domain.

Concept of Webometrics

The term webometrics was first suggested by Almind and Ingwersen (1997). Webometrics is the application of informetric methods to World Wide Web. According to Bjorneborn (2004), webometrics is the study of the quantitative aspects of the construction and use of information resources, structures and technologies on the web drawing on bibliometric and informetric approaches. Ramesh Babu, Jeyshankar and Nageswara Rao (2010) defined 'webometrics' as a quantitative study of web-related phenomena. Malinský and Jelínek (2010) emphasized that webometrics is purely a quantitative research area, but which may be enhanced by sentiment analysis and opinion mining. The webometrics study could be applied to web with commercial search engines providing the raw data. Webometrics is also known as cybermetrics. Bibliometrics, Informetrics, Scientometrics, Web mining and Virtual ethnography are related and similar scientific fields of webometrics.

The science of webometrics tries to measure the World Wide Web to get the knowledge about the number and types of hyperlinks structure of the World Wide Web and usage patterns.

Bjorneborn and Ingwersen (2004), identified four major areas for webometrics: web page content analysis, web link structure analysis, web usage analysis (including log files of users' searching and browsing behaviour), and web technology analysis (including search engine performance). Thelwall (2009) stated that webometrics is the study of web based content with primarily quantitative methods for social science research goals using techniques that are not specific to one field of study. One of the strength of the webometrics is that its object of the study, the web, which enjoys a widespread use that webometric result, can benefit many different line of search. In summation, webometrics is concerned with measuring aspects of the web: domain, web sites, web pages, words in web pages, links, web search engine results and web impact factor (Jeyshankar, 2011). Interdisciplinary research is getting more significant by enlarging the types of subjects of study and the techniques used. This field of study requires contributions from information science, computer science and statistical science. Webometric covers research of all network based on communications using informetric or other qualitative measures. Studies in webometrics focus on hyperlinks as a potential source of new information. Webometric research has fallen into two main categories namely link analysis and search engine evaluation. Search engines are also used to collect data for link analysis. Thus, webometrics is an emerging research field in library and information science.

ALEXA: A Tool for Website Evaluation

Alexa Internet was established as an independent company in April 1, 1996 by American web entrepreneurs Brewster Kahle and Bruce Gilliat and currently it is a California-based subsidiary company of Amazon.com which provides commercial web traffic data. Alexa is a global pioneer in the world of analytical insight. Alexa Toolbar users access various websites and it is a very powerful tool used to rank website traffic and find out how your website traffic stacks up against all other competitors. This is one of the most accurate freely available tools to find out how well your site ranks up against millions of other sites on the Web (Alexa Internet, 2019). Alexa is one of the most widely used tools for websites evaluation. Alexa presents the following websites attributes: traffic rank, pages viewed, speed, links, bounce percentage, time on site, search percentage and local & foreign users. Alexa provides the following clarification on each of the attribute.

- **Traffic rank:** It is an estimate of popularity in a specific country. Alexa computes websites traffic by analysing the web usage of millions of Alexa toolbar users and data obtained from other diverse traffic data sources. The traffic is based on three months of aggregated historical traffic data and is a combined measure of pages viewed and users (reach). The lowest number indicates best traffic rank.
- **Daily page views per visitor:** It is an estimated percentage of global page views. Page views measure the number of pages viewed by site visitors. Multiple page views of the same page made by the same user on the same day are counted only once. The page views per user numbers are the average numbers of unique pages viewed per user per day by the visitors to the site. The three-month change is determined by comparing a site's current page view numbers with those from pages viewed three months ago, which reflects the average number of pages viewed by users in a certain web site. Page views/user is the estimate of daily unique page views per user.
- **Speed:** It is the measure of average load time. Web pages downloading speed that reflects the average time for opening pages of a certain web site.
- **Links:** A measure of reputation and web impact, which includes a number of web sites connected to a certain web site which shows its popularity.
- **Bounce percentage:** Estimated percentage of visits that consist of a single page view.
- **Time on site**: It measures daily time on site (mm:ss).
- **Search percentage:** Percentage of visits that came from a search engine.
- **Audience Geography:** This is the percentage of people who visit a website (local and foreign).

In this study, the researcher intend to conduct a webometric study on Universities websites in Nigeria using Alexa Internet which is one of the most widely used tools for websites evaluation. It was the tool used by previous researchers on webometrics studies (Jowkar and Didegah, 2010; Kanellopoulos and Kotsiantis, 2012; Bhat, 2013; Ambhore, Khaprde, and Ranveer (2016); Stephen and Pramanathan (2016); Nahem and Saraswati, 2017; Stephen, 2017; Stephen (2019); Muthuraja and Veerabasavaiah, 2018; Subhash and Khaparde, 2019). The Alexa ranking system has been utilised by a number of scholars in the extant literature in different areas, such as transforming Web pages to become standards-compliant (Chen and Shen 2006), segmenting

Web pages for mobile devices (Hattori, Hoashi, Matsumoto and Sugaya, 2007), measuring privacy loss and protection (Kr-ishnamurthy, Malandrino and Wills, 2007), testing the reliability of the Domain Name System (Ramasubramanian and Sirer, 2004). It is therefore, significant for library and information professionals to conduct research on internet for optimum utilisation of internet. In view of the above factor, the researcher attempted to conduct a webometric study on Universities websites in Nigeria using Alexa internet

LITERATURE REVIEW

Website evaluation provides useful information for users to estimate sites validation and popularity. So far, a number of studies have conducted webometric studies on different websites. The researcher has attempted to review some of the website evaluation studies using Alexa Internet as tool for evaluation which is also applicable to this study.

Jowkar and Didegah (2010) in their study examined Iranian Newspapers' Websites by the method of Alexa search engine using correspondence analysis. To conduct the study 24 newspaper websites were selected from Iranian Magazines Information Bank. On the basis of data collected by Alexa, Iran newspaper has the highest traffic rank and highest number of links among others. Bashirmazandaran newspaper has highest number of foreign users on the other hand there is no foreign user of Karvakargar newspaper. The finding of the study shows that most newspaper websites' visitors come from the US.

Kanellopoulos and Kotsiantis (2012) evaluated Greek newspaper websites using clustering and a number of criteria obtained from the Alexa search engine. Based on data obtained from Alexa, the Naftemporiki newspaper has the highest traffic rank and the Eleftherotypia newspaper with the largest number of links among others. The Macedonia has the highest number of foreign users. The results of the study also show that most newspaper websites' visitors come from the UK.

Bhat (2013) investigated the official of Websites Indian Newspaper using Alexa Internet. The results of this study show that Dainik Bhaskar has the highest traffic rank. Punjab Kesari has the highest number of average pages viewed per day and estimated daily time spent on site by the

visitors. The fastest downloading speed goes to Economic Times. Hindustan Times with the highest number of links. Decan Herald has the highest reach amongst the global internet users, whereas Udayavani has the lowest bounce percentage. The highest percentage of visits that came from search engines is for Dainik Jagran. The highest number of foreign users is for Ananda Bazar Patrika. Most of the foreign users to Indian newspapers come from the USA.

Ambhore, Khaprde, and Ranveer (2016) conducted a webometric study on Marathi Newspapers Websites Using Alexa Internet. The 13 leading Marathi newspaper websites from Maharashtra are taken for evaluation in the study. The study found that Deshonatti has the highest traffic rank in India as well as global. Divya Marathi has the highest number of average pages viewed per day and estimated daily time spent on site by the visitors. The fastest downloading speed is for Lokmat while Maharashtra Times has the highest number of links. Punyanagari has the lowest bounce percentage and highest percentage of visits that came from search engines. The highest number of foreign users is for Tarun Bharat. Most of the foreign users to Marathi newspapers come from the Gulf countries like United Arab, Pakistan.

Stephen and Pramanathan (2016) their study provides an overall picture of Indian Institute of Technology's websites status in terms of their performances on the web based on the eight indexes of Alexa internet evaluation tool. Results show that most of the IITs websites do not act successfully on the web and need much attention. Similarly, some high traffic ranking IITs showed weak performance in some of the attributes while some low traffic ranking IITS performed comparatively better in some of the attributes. The downloading speed and bounce rate of most of the IITs are not satisfactory, which needs to be given due attention as it could increase the number of visitors for the respective IITs and their consequent global reach.

Naheem and Saraswati Rao (2017) carried out webometric analysis on 8 leading Telugu newspaper websites from the state of Andra Pradeesh were analysed using well known tool called "Alexa Internet". The outcome of this study shows that website of the newspaper Eenadu performed credibly well in most of the attributes like highest traffic rank in both local & global, daily time spent on site by the visitors, number of links and the highest number of foreign users. Sakshi with the highest number of average pages viewed per day and lowest bounce percentage.

Andhra Prabha has the fastest downloading speed. The highest percentage of visits that came from search engines goes to Visalaandhra.

Stephen (2017) examined the websites of Ministry of Electronics and Information Technology Organiastions in India using the Alexa Internet. The 16 Meity Organiastions in India which have the web presence are included in the study. Findings show that the website of Unique Identification Development Authority of India (UIDAI) is the most popular as well ranked first among the entire organiastions website. It has global rank 572, 29th rank in India. National Informatics Centre (NIC) and Education Research Network (ERNET) websites with the highest bounce rate of 64.5. UIDAI websites has the highest links of 1154. Among the Meity autonomous bodies National Institute of Electronics and Information Technology (NIELIT) websites ranked first and overall NIELIT websites holds second rank.

Muthuraja and Veerabasavaiah (2018) also conducted webometric analysis on 10 leading Kannada language newspaper websites from the state of Karnataka. Each newspaper website was searched in Alexa databank and relevant data including traffic rank, pages viewed, speed, links, and bounce percentage, time on site, search percentage, and percentage of Indian/foreign users were collected and these data were tabulated and analysed. The result of this study shows that Vijayakarnataka has the highest traffic rank in India (2,255), highest number of average pages viewed per day (7.32) and highest estimated daily time spent on site by the visitors (12:40). Udayavani has 27,903 the highest traffic rank in global.

Stephen (2019) conducted a study entitled Webometric Analysis of Central Universities in North Eastern Region, India using Alexa Internet. This study found that the best-ranked Central University of North East Region in India goes to NEHU and TU with traffic ranks of 8484 and 8,511 respectively. Nagaland University with the highest number of average pages viewed by users per day (4.1), Sikkim University has highest (55.7%) upstream site of Google among other Central Universities of North East Region in India, 100% of sub domain at “manipuruniv.ac.in” for Manipur University website and “cau.ac.in” for Central Agricultural University. North Eastern Hill University (NEHU) and Sikkim University (SU) shows higher rate of bounce percentage (42.50) shows its weak performance.

Subhash and Khaparde (2019) in their study entitled A Webometric Study of Selected Popular Social Media Websites in World using a Link Analysis Approach. The 64 Popular Social Media websites were selected for the study. Each social media website was searched in Alexa databank relevant data were collected, tabulated and analysed. The study found that the best-ranked social media locally and globally are Google+, YouTube, and Facebook with traffic ranks of 1, 2 and 3, respectively. The Tout (214,712) and Cellufun (1,770,280) having the highest traffic rank locally and globally. Facebook received the highest number of links (5,047,596) and Gaia Online has the highest number of average pages viewed per day. The estimated daily time spent on site by the visitors is highest for VKontakte (VK) (9.59). Tagged has the lowest bounce percentage (17.00%) and Vine has the fastest downloading speed. The highest percentage of visits that came from search engines goes to Quora (58.40%). However, the present study intends to evaluate webometric analysis of Nigeria University websites, which remains unexplored.

OBJECTIVES

The objective of this study is to conduct webometric analysis of Universities websites in Nigeria based on the following Alexa indexes: traffic rank, pages viewed, time on site, speed, links, bounce percentage, search percentage, audience geography (Nigeria and foreign users).

SCOPE

The present study makes a webometric analysis of Universities websites in Nigeria. The scope of the study is limited to top 20 University websites in the country, comprises of Federal, State and Private Universities and aimed at establish a kind of academic ranking of these websites by measuring their web traffic rank. The ranking of websites will help the reader to compare and identify Universities websites in Nigeria according to their traffic rank performance evaluation.

METHODOLOGY

The present study has been conducted by using webometric methods with the aid of Alexa databank, which is known as the most famous tool for evaluating websites. In this study, eight indices of alexa were selected (traffic rank in Nigeria and global, pages viewed, speed, links,

bounce percentage, time on site, search percentage, and Nigeria & foreign users percentage) in order to analyse Nigeria Universities websites.

The top 20 Nigeria Universities websites listed in the website of the National Universities Commission and Naij.com (www.nuc.edu.ng & www.naij.com) as at October 17th, 2019 were taken as samples for evaluation in the current study. The internet addresses (URLs) of these Universities were collected from the internet using Google (www.google.com). Subsequently, search of each University website was conducted on 20th October, 2019 in Alexa website (www.alexa.com) and all the data were obtained by real-time examination based on evaluation indexes. Due to the dynamic nature of the web, search on each of the websites was completed on the same day to minimise possible errors associated with frequent website updates as it is expected of Nigeria Universities websites. The data were further entered into the Microsoft Excel worksheet. Accordingly, data were analysed using descriptive statistics and relevant findings were tabulated in consistent with the set objectives. The list of top 20 Universities in Nigeria with their URLs is presented in Table 1.

Table 1: List of Top 20 Universities in Nigeria with URLs

S/N	Name of Universities	URL
1	University of Ibadan	www.ui.edu.ng
2	University of Nigeria, Nsukka	www.unn.edu.ng
3	University of Lagos	www.unilag.edu.ng
4	Ahmadu Bello University	www.abu.edu.ng
5	Obafemi Awolowo University	www.oauife.edu.ng
6	University of Ilorin	www.unilorin.edu.ng
7	Covenant University	www.covenantuniversity.edu.ng
8	Landmark University	www.lmu.edu.ng
9	University of Benin	www.uniben.edu
10	Federal University of Technology, Akure	www.futa.edu.ng
11	Federal University of Technology, Minna	www.futminna.edu.ng
12	University of Agriculture, Abeokuta	www.unaab.edu.ng
13	Babcock University	www.babcock.edu.ng
14	Kwara State University	www.kwasu.edu.ng
15	University of Port Harcourt	www.uniport.edu.ng
16	Lagos State University	www.lasu.edu.ng
17	Ladoke Akintola University of Technology	www.lautech.edu.ng
18	Adekunle Ajasin University	www.aaua.edu.ng
19	University of Uyo	www.uniuyo.edu.ng
20	Bayero University, Kano	www.buk.edu.ng

RESULTS AND DISCUSSION

The data regarding top 20 Nigeria Universities websites for eight indexes (traffic rank, pages viewed, speed, links, bounce percentage, time on site, search percentage, and Nigeria/foreign users) as obtained from Alexa Internet is presented in Table 2.

Table 2: Data gathered from Alexa Internet

S/N	Name of Universities	Links	Pages Viewed	Speed (Seconds)	Bounce (%)	Time on Site	Search (%)	Traffic Rank		Users Percentage	
								Nigeria	Global	Nigeria (%)	Foreign (%)
1	www.ui.edu.ng	1,818	2.60	1.955	53.10	4:49	34.00	295	29, 962	94.8	0.0
2	www.unn.edu.ng	1,361	4.20	2.842	34.30	10:40	42.90	276	31,461	95.7	0.0
3	www.unilag.edu.ng	620	5.90	2.500	28.10	9:05	36.30	150	17, 667	86.9	1.6
4	www.abu.edu.ng	303	4.08	3.331	45.00	8:36	45.20	189	18,461	94.6	3.1
5	www.oauife.edu.ng	478	3.37	4.519	34.10	9:44	34.80	309	23,638	94.5	0.0
6	www.unilorin.edu.ng	350	4.60	1.264	40.20	7:41	39.80	193	28,549	96.0	0.0
7	www.covenantuniversity.edu.ng	683	3.10	3.854	65.10	4:37	39.30	126	21,769	94.2	0.0
8	www.lmu.edu.ng	137	3.60	1.501	42.70	6:42	18.80	710	108,003	93.8	0.0
9	www.uniben.edu	256	1.60	1.138	60.70	6:17	61.90	1,957	111,407	87.2	11.1
10	www.futa.edu.ng	202	2.90	3.403	54.30	4:39	36.10	336	44, 214	97.7	0.0
11	www.futminna.edu.ng	257	3.40	2.590	39.20	6:07	43.80	736	84,787	97.3	0.0
12	www.unaab.edu.ng	331	4.50	1.404	36.60	7:02	71.40	486	61, 217	91.1	0.0
13	www.babcock.edu.ng	117	2.60	1.425	38.30	6:21	60.00	1,439	160,730	91.9	0.0
14	www.kwasu.edu.ng	117	6.80	2.615	18.60	15:15	N/A	905	83, 969	100.0	0.0
15	www.uniport.edu.ng	384	3.50	3.367	29.60	7:10	26.10	1,403	99,208	93.4	0.0
16	www.lasu.edu.ng	191	8.50	1.444	16.80	18:56	26.40	553	54,411	94.4	0.0
17	www.lautech.edu.ng	145	9.00	2.698	19.90	16:09	43.80	505	76,708	98.0	0.0
18	www.aaua.edu.ng	6,450	4.50	1.602	29.40	8:38	N/A	1,273	150,829	91.4	0.0
19	www.uniuyo.edu.ng	137	2.20	11.26	40.20	6:21	19.60	931	91,677	100.0	0.0
20	www.buk.edu.ng	149	5.20	1.406	23.70	9:00	61.10	1,213	128,085	100.0	0.0

Links

Regarding the number of links each University website has received, Adekunle Ajasin University has the highest number of links (6,450) which is considerably different from other University websites. This websites has covered a various range of which has probably made it much more popular than others. University of Ibadan with 1, 818 links occupy second position, while University of Nigeria, Nsukka is in third position with 1,361 links. Babcock University and Kwara State University are the last in the queue with 117 links respectively. Majority of the Universities websites have less than three hundred links shows their poor performance in this attribute. The web impact of majority of Universities in Nigeria is not encouraging as indicated by numbers of their links.

Page Views

As presented in Table 2, with respect to this attribute, Ladoke Akintola University of Technology has the highest number of average pages viewed by users per day (9.00), followed by Lagos State University (8.50) and Kwara State University (6.80). The lowest number of average pages viewed is 1.60 for University of Benin. Majority of the Universities websites did extremely poor in this attribute. This may be due to the poor internet accessibility in Nigeria and high tariff of data for browsing.

Downloading Speed

Pertaining to this attribute, the fastest downloading speed is 1.138 seconds for University of Benin, followed by University of Ilorin (1.264 seconds) and University of Agriculture, Abeokuta occupies third place with 1.404 seconds. University of Uyo and Obafemi Awolowo University have the highest downloading speed (11.26 seconds and 4.519 seconds, each respectively). The whole downloading speeds are in the range 1.138 – 11.26, which apparently point towards the weak performance of the Nigeria Universities in this attribute.

Bounce Percentage

Lagos State University has the lowest bounce percentage (16.80%), followed by Kwara State University with (18.60%) and Ladoke Akintola University (19.90%). Covenant University with the highest rate of bounce percentage (65.10%) shows it weak performance as reported in Table 2. The higher bounce rate in most of the Universities websites signifies their weak performance in this attribute.

Daily Time on Site

The estimated daily time spent on site by the visitors is highest for Lagos State University (18.56), Ladoke Akintola University occupies second place with (16:09), followed by Kwara State University with (15:15) and the lowest in this category is for Covenant University (4:37). The time spent on rest of the websites is in the range of 4:39 – 10:40 as presented in Table 2.

Search Percentage

The highest percentage of visits that came from search engines is (71.40%) for University of Agriculture, Abeokuta, next is University of Benin (61.90%), followed by Bayero University (61.10%), and Babcock University (60.00%). The lowest is Landmark University with (18.80%) and so on. This shows that majority of Nigeria University websites users search for news or information without going through search engines.

Traffic Rank

Table 2 clearly shows that Covenant University, University of Lagos, Ahmadu Bello University, University of Ilorin, University of Nigeria, Nsukka and University of Ibadan are the top 6 best traffic ranked Universities in Nigeria with traffic ranks of 126, 150, 189, 193, 276, and 295 respectively. Out of the 20 Universities, 15 have traffic rank of less than 1,000, which projects their good performance in this attribute while compared to others. As regards the global traffic rank, University of Lagos, Ahmadu Bello University, Covenant University, Obafemi Awolowo University, University of Ilorin and University of Ibadan have traffic rank less than 30,000. The rest of the Universities have shown weak performance.

Audience Geography

As shown in Table 2, the highest percentage of Nigeria users goes to Kwara State University, University of Uyo, and Bayero University (100.0%, each respectively). University of Lagos has the lowest percentage of users in Nigeria (86.9%) as well as foreign (1.6%). University of Benin accounted for the highest percentage of foreign users (11.1%) and Ahmadu Bello University occupies second place with (3.1%). However, the websites of Kwara State University, University of Uyo and Bayero University have not been visited by anybody from outside Nigeria.

Table 3: Nigeria and Foreign Users

S/N	Name of job search	Percentage of Nigeria and foreign visitors
1	www.ui.edu.ng	Nigeria (94.8), Others (5.2)
2	www.unn.edu.ng	Nigeria (95.7), Others (4.3)
3	www.unilag.edu.ng	Nigeria (86.9), Canada (1.6), Others (11.5)
4	www.abu.edu.ng	Nigeria (94.6), Saudi Arabia (1.9), Ethiopia (1.2), Others (2.3)
5	www.oauife.edu.ng	Nigeria (94.5), Others (5.5)
6	www.unilorin.edu.ng	Nigeria (96.0), Others (4.0)
7	www.covenantuniversity.edu.ng	Nigeria (94.2), Others (5.8)
8	www.lmu.edu.ng	Nigeria (93.8), Others (6.2)
9	www.uniben.edu	Nigeria (87.2), India (11.1), Others (1.7)
10	www.futa.edu.ng	Nigeria (97.7), Others (2.3)
11	www.futminna.edu.ng	Nigeria (97.3), Others (2.7)
12	www.unaab.edu.ng	Nigeria (91.1), Others (8.9)
13	www.babcock.edu.ng	Nigeria (91.9), Others (8.1)
14	www.kwasu.edu.ng	Nigeria (100.0)
15	www.uniport.edu.ng	Nigeria (93.4), Others (6.6)
16	www.lasu.edu.ng	Nigeria (94.4), Others (5.6)
17	www.lautech.edu.ng	Nigeria (98.0), Others (2.0)
18	www.aaua.edu.ng	Nigeria (91.4), Others (8.6)
19	www.uniuyo.edu.ng	Nigeria (100.0)
20	www.buk.edu.ng	Nigeria (100.0)

Table 3 shows the data on Nigeria and foreign users. Most of the foreign users to Nigeria top 20 Universities websites come from India. Other foreign visitors come from countries like Saudi Arabia, Canada, and Ethiopia.

CONCLUSION AND RECOMMENDATIONS

This study has contributed to the existing body of knowledge by providing a fair idea and information about webometric analysis of Universities websites in Nigeria. The study has been able to establish that most of the Nigeria University websites do not exhibit a remarkable performance on the web, which necessitates immediate attention. Also, some high traffic ranking Universities showed weak performance in some of the attributes while some low traffic ranking universities performed credibly well in some of the attributes. The downloading speed and bounce rate of most of the universities are not pleasing, thereby requires urgent attention as it could increase the number of visitors for the respective universities and their consequent global reach. The knowledge this study has contributed can be of great significance to stakeholders in the field of study such as government bodies of the Nigeria education system, the university managements and website developers. Besides, the study outcomes can be helpful for website

managers in any field and anyone interested to increase usage of a website by analysing the use of website using Alexa internet. The study recommends that the universities web developer should pay strict attention to the security issue of the universities websites in order to optimise the use of their websites to the maximum. In the same vein, the Nigeria universities webmaster should endeavour to update the websites on a regular basis to bridge the gap of dead codes, malwares and other vulnerable attack from the online terrorist. Likewise, Nigeria universities management should allocate meaningful budget for the development and continuous maintenance of their websites. Finally, there should be regular optimisation of Nigeria universities websites search engine so as to improve their visibility and relevance nationally and globally.

LIMITATION AND FUTURE RESEARCH DIRECTION

In spite of the influence of this study in Nigeria universities context, this study has limitations that should be taken into consideration. First, the study has employed Alexa Internet as a tool to carry out webometric analysis of Universities websites in Nigeria; further studies can adopt other tools such as AltaVista etc. to conduct webometric analysis in the study area. Second, the study only focused on universities (federal, state and private) but other tertiary institutions like Polytechnics and Colleges of Education (NCE) was excluded in this study. The future study can work on these limitations and use this model to study Polytechnics, NCE and Technical Colleges' websites quality in Nigeria.

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